

# 1 stepped pressure equilibrium code : bf10aa

## Contents

1 stepped pressure equilibrium code : bf10aa	1
1.0.1 purpose and overview . . . . .	1

### 1.0.1 purpose and overview

1. Returns the magnetic field field line equations in external domain (free-boundary).
2. The transformation from cylindrical ( $R, \phi, Z$ ) to Cartesian ( $x, y, z$ ) is described by  $x = R \cos \phi$ ,  $y = R \sin \phi$  and  $z = z$ .
3. The vector transformation from Cartesian to cylindrical (as required by the field line integration routine pp10aa) is given:

$$B^x \nabla x + B^y \nabla y + B^z \nabla z = B^x (\cos \phi \nabla R - \sin \phi R \nabla \phi) + B^y (\sin \phi \nabla R + \cos \phi R \nabla \phi) + B^z \nabla z. \quad (1)$$

bf10aa.h last modified on 2012-09-19 ;

---